Khawaja Fahad Iqbal

Assistant Professor

School of Mechanical & Manufacturing Engineering

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About

Dr. Khawaja Fahad Iqbal is working as Assistant Professor in the School of Mechanical & Manufacturing Engineering. Dr. Khawaja Fahad Iqbal has a PhD in Robotics. Dr. Khawaja Fahad Iqbal has published 26 research articles & conference papers having a citation count of 136, carried out 5 projects and filed 0 intellectual property.

Qualifications

PhD in Robotics 2017 - 2022
Tohoku University , Japan

MS in Bioengineering and Robotics 2015 - 2017
Tohoku University , Japan

BE in Mechatronics Engineering 2007 - 2011
NUST, Islamabad , Pakistan

Experience

Assistant Professor 2024- Present
School of Mechanical & Manufacturing Engineering

Assistant Professor 2022 - 2024
School of Mechanical & Manufacturing Engineering

Regular Visiting Faculty 2022 - 2022
School of Mechanical & Manufacturing Engineering

Lab Engineer 2021 - 2022
School of Mechanical & Manufacturing Engineering

Lab Engineer 2014 - 2014
School of Mechanical & Manufacturing Engineering

Lab Engineer 2012 - 2014
School of Mechanical & Manufacturing Engineering

Teaching Assistant 2011 - 2012
EME College, NUST , Peshawar Road, Rawalpindi

Research Projects

National Projects

Design and Development of Quadrupedal Robot 2025
Funding Agency: IGNITE
Amount: PKR 77,461.00
Status: Completed

AGILE (Artificial General Intelligence Learning Engine) 2023
Funding Agency: NUST
Amount: PKR 91,000,000.00
Status: Approved_inprocess

Intelligent Field Robotics Lab (IFRL) 2018
Funding Agency: HEC
Amount: PKR 71,100,000.00
Status: Approved_inprocess

Preserving Intellectual and Material Cultural Heritage through Augmented and Virtual Reality 2022
Funding Agency: HEC
Amount: PKR 16,380,000.00
Status: Approved_inprocess

International Projects

Industry Projects

National Projects

ROBOGEN 2022
Client: US Embassy
Amount: PKR 500,000.00
Status: Completed

International Projects

Research Articles

Active interception of moving ball: a multi-player strategy for humanoid soccer robots 2024

Saman Khan Sara Baber Sial Khawaja Fahad Iqbal Yasar Ayaz Jemas H. Brusay Muhammad Attique Khan Jamel Baili

Multimedia Tools and Applications, Pages 1-17

Impact Factor: 3.000 | **Quartile:** 2

DOI: https://doi.org/10.1007/s11042-024-20491-6

A Comprehensive Multimodal Humanoid System for Personality Assessment Based on the Big Five Model 2024

Anum Jaffar Sara Ali Khawaja Fahad Iqbal Yasar Ayaz Ali R Ansari Muhammad A B Fayyaz Raheel Nawaz

IEEE Access, Volume 12, Pages 84261-84272

Impact Factor: 3.400 | **Quartile:** 2 | **Citations:** 4

DOI: 10.1109/ACCESS.2024.3412931

Dynamic Goal Tracking for Differential Drive Robot Using Deep Reinforcement Learning 2023

Mahrukh Shahid Semab Naimat Khan Khawaja Fahad Iqbal Sara Baber Sial Yasar Ayaz

Neural Processing Letters, Pages 1-18

Impact Factor: 3.1 | **Quartile:** 3 | **Citations:** 5

DOI: https://doi.org/10.1007/s11063-023-11390-2

Deploying efficient net batch normalizations (BNs) for grading diabetic retinopathy severity levels from fundus images 2023

Summiya Batool Syed Omer Gilani Asim Waris Khawaja Fahad Iqbal Niaz Bahadur Khan Muhammad Ijaz Khan Syed Muhammad Eldin Fuad A. Awwad

Scientific Reports, Volume 13, Issue 1, Article Number 14462

Impact Factor: 4.6 | **Quartile:** 1 | **Citations:** 6

DOI: 10.1038/s41598-023-41797-9

Techno-Economic Analysis of Vacuum Membrane Distillation for Seawater Desalination 2023

Hassaan Idrees Sara Baber Sial Muhammad Sajid Muhammad Rashid Fahad Iqbal Khawaja Zaib Ali Muhammad Nabeel Anwar

Membranes, Volume 13, Issue 3, Article Number 339

Impact Factor: 4.562 | **Quartile:** 1 | **Citations:** 8

DOI: https://doi.org/10.3390/membranes13030339

A Human-Following Motion Planning and Control Scheme for Collaborative Robots Based on Human Motion Prediction 2021

Khawaja Fahad Iqbal Akira Kanazawa Jun Kinugawa Kazuhiro Kosuge

Sensors, Volume 21(24), Article Number 8229

Impact Factor: 3.576 | **Quartile:** 1 | **Citations:** 12

DOI: 10.3390/s21248229

A real-time motion planning scheme for collaborative robots using HRI-based cost function 2021

Khawaja Fahad Iqbal Akira Kanazawa Silvia Romana Ottaviani Jun Kinugawa Kazuhiro Kosuge

International Journal of Mechatronics and Automation, Volume 8, No.1, Pages 42-52

Impact Factor: N/A | **Citations:** 4

DOI: 10.1504/IJMA.2021.113727

Collaborative Optimal Reciprocal Collision Avoidance for Mobile Robots 2015

Shehryar Ali Khan Yasar Ayaz Mohsin Jamil Syed Omer Gillani Muhammad Naveed Ahmed Hussain Qureshi Dr. Khawaja Fahad Iqbal

International Journal of Control and Automation, Volume 8, No.8, Pages 203-212

Impact Factor: -

DOI: http://dx.doi.org/10.14257/ijca.2015.8.8.21

Conference Proceedings

Socio-Cultural Factors of Industrial Workers in Low-Middle Income Countries (LMIC): Pilot Study 2023

Umer Asgher Sara Ali Yasar Ayaz Sofia Scataglini Salman Nazir Usama Rashed Ellie Abdi Fahad Iqbal Khawaja Redha Taiar José Arzola-Ruiz

14th International Conference on Applied Human Factors and Ergonomics (AHFE 2023) and the Affiliated Conferences, res.country(233,)

Citations: N/A

DOI: 10.54941/ahfe1003296

Modeling and Control of Liquid Carrying Aerial Vehicle's Endurance and Performance Based on LQR And PID Control Strategies 2023

Syed Muhammad Nashit Arshad Yasar Ayaz Sara Ali Khawaja Fahad Iqbal Noman Naseer

2023 7th International Multi-Topic ICT Conference (IMTIC), res.country(177,)

Citations: N/A
DOI: 10.1109/IMTIC58887.2023.10178472

Human Robot Interaction: Identifying Resembling Emotions Using Dynamic Body Gestures of Robot 2023

Sara Ali Faisal Mehmood Khawaja Fahad Iqbal Yasar Ayaz Muhammad Sajid Muhammad Babar Sial Muhammad Faiq Malik Kashif Javed
2023 3rd International Conference on Artificial Intelligence (ICAI), res.country(177,)
Citations: N/A
DOI: 10.1109/ICAI58407.2023.10136649

Novel Approach for Sensing the Humanoid Hand Finger Position Using Non-contact TMR Sensor 2022

Saeed Iqbal Shahid Nawaz Khan Muhammad Sajid Sara Ali Khawaja Fahad Iqbal Umer Asgher Yasar Ayaz
International Conference on Applied Human Factors and Ergonomics (AHFE) 2022, res.country(233,)
Citations: N/A
DOI: http://doi.org/10.54941/ahfe1001599

A Chain-Driven Live Roller Mechanism for Loading and Unloading Packages on Autonomous Mobile Robots in Warehouses 2022

Muhamad Ammar Muhammad Moeed Ahmed Muhammad Abdullah Younas Khezar Qayyum Khawaja Fahad Iqbal Sara Ali Umer Asgher Yasar Ayaz
International Conference on Applied Human Factors and Ergonomics (AHFE) 2022, res.country(233,)
Citations: N/A
DOI: http://doi.org/10.54941/ahfe1001600

Personality Prediction in Human-Robot-Interaction (HRI) 2022

Anum Jaffer Sara Ali Khawaja Fahad Iqbal Yasar Ayaz Muhammad Sajid Umer Asgher
International Conference on Applied Human Factors and Ergonomics (AHFE) 2022, res.country(233,)
Citations: N/A
DOI: http://doi.org/10.54941/ahfe1001601

Smooth Gait Generation for Quadrupedal Robots Based on Genetic Algorithm Optimization 2022

Zainullah Khan Farhat Naseer Khawaja Fahad Iqbal Sara Ali Yasar Ayaz Muhammad Sajid
2022 2nd International Conference on Artificial Intelligence (ICAI), res.country(177,)
Citations: N/A
DOI: 10.1109/ICAI55435.2022.9773617

A Review on Different Approaches for Assessing Student Attentiveness in Classroom using Behavioural Elements 2022

Kainat Sara Ali Khawaja Fahad Iqbal Yasar Ayaz Muhammad Sajid
2022 2nd International Conference on Artificial Intelligence (ICAI), res.country(177,)
Citations: 2
DOI: 10.1109/ICAI55435.2022.9773418

An Adaptive Neuro-Fuzzy Inference System to Solve Perceptual Aliasing for Autonomous Mobile Robots 2022

Syed Madiha Qamar Khawaja Fahad Iqbal Sara Ali Ahmed Hussain Qureshi Yasar Ayaz Muhammad Naveed Abdul Ghafoor Abbasi
27th International Symposium on Artificial Life and Robotics (AROB 2022), res.country(113,)
Citations: N/A
DOI: Not available yet

Augmenting RRT* with Local Trees for Real Time Motion Planning in Complex Cluttered Environments 2014

Ahmed Husain Qureshi Saba Mumtaz Abdul Ahad Ashfaque Sheikh Khawaja Fahad Iqbal Yasar Ayaz Osman Hasan
2014 19th International Conference on Methods and Models in Automation and Robotics (MMAR), res.country(178,)
Citations: 3
DOI: 10.1109/MMAR.2014.6957432

Centre of mass avoidance planner using radius of gyration for Reciprocal Velocity Obstacles 2014

Shahwar Yaseen Yasar Ayaz Khawaja Fahad Iqbal Naveed Muhammad Syed Omer Gilani Mohsin Jamil Syed Irtiza Ali Shah
2014 International Conference on Robotics and Emerging Allied Technologies in Engineering (iCREATE), res.country(177,)
Citations: N/A
DOI: 10.1109/iCREATE.2014.6828351

Triangular geometry based optimal motion planning using RRT*-motion planner 2014

Ahmed Hussain Qureshi Saba Mumtaz Khawaja Fahad Iqbal Yasar Ayaz Mannan Saeed Muhammad Osman Hasan Whoi Yul Kim Moonsoo Ra
2014 IEEE 13th International Workshop on Advanced Motion Control (AMC), res.country(113,)
Citations: 11
DOI: 10.1109/AMC.2014.6823312

Adaptive Potential guided directional-RRT 2013

Ahmed Hussain Qureshi Saba Mumtaz Khawaja Fahad Iqbal Badar Ali Yasar Ayaz Faizan Ahmed Mannan Saeed Muhammad Osman Hasan Whoi Yul Kim Moonsoo Ra

2013 IEEE International Conference on Robotics and Biomimetics (ROBIO), res.country(48,)

Citations: 20

DOI: 10.1109/ROBIO.2013.6739744

Human tracking by a mobile robot using 3D features 2013

Badar Ali Ahmed Hussain Qureshi Khawaja Fahad Iqbal Yasar Ayaz Syed Omer Gilani Mohsin Jamil Naveed Muhammad Faizan Ahmed Mannan Saeed Muhammad Whoi-Yul Kim Moonsoo Ra

2013 IEEE International Conference on Robotics and Biomimetics (ROBIO), res.country(48,)

Citations: 6

DOI: 10.1109/ROBIO.2013.6739841

Human detection and following by a mobile robot using 3D features 2013

Badar Ali Khawaja Fahad Iqbal Yasar Ayaz Muhammad Naveed

22013 IEEE International Conference on Mechatronics and Automation, res.country(113,)

Citations: 8

DOI: 10.1109/ICMA.2013.6618174

Potential guided directional-RRT* for fast optimal motion planning 2013

Ahmed Hussain Qureshi Khawaja Fahad Iqbal Syeda Madiha Qamar Fahad Islam Yasar Ayaz Naveed Muhammad

2013 IEEE International Conference on Mechatronics and Automation, res.country(113,)

Citations: 42

DOI: 10.1109/ICMA.2013.6617971

A Solution to Perceptual Aliasing Through Probabilistic Fuzzy Logic and SIFT 2013

Syed Madiha Qamar Khawaja Fahad Iqbal Ahmed Hussain Qureshi Muhammad Naveed Yasar Ayaz Abdul Ghafoor Abbasi

2013 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), res.country(13,)

Citations: N/A

DOI: 10.1109/AIM.2013.6584289

Sparsed potential-PCNN for real time path planning and indoor navigation scheme for mobile robots 2011

Syed Usman Ahmad Khawaja Fahad Iqbal Yasar Ayaz Faraz Kunwar

IEEE International Conference on Mechatronics and Automation (ICMA), res.country(48,)

Citations: 5

DOI: 10.1109/ICMA.2011.5986339

Editorial Activities

Energy for Sustainable Development 2025

Reviewed Papers for Journals

Impact Factor: 4.9

European Scientific Journal 2025

Reviewed Papers for Journals

Impact Factor: N/A

Symmetry 2025

Reviewed Papers for Journals

Impact Factor: 2.2

Aerospace 2025

Reviewed Papers for Journals

Impact Factor: 2.2

Drones 2025

Reviewed Papers for Journals

Impact Factor: 4.8

2025

Reviewed Papers for Journals

Impact Factor: N/A

Electronics 2025

Reviewed Papers for Journals

Impact Factor: 2.6

Intelligent service robotics 2025
Reviewed Papers for Journals
Impact Factor: 2.3

Machines 2025
Reviewed Papers for Journals
Impact Factor: 2.2

Computers and Electronics in Agriculture 2025
Reviewed Papers for Journals
Impact Factor: 7.7

IFPG-Innovation Discovery 2025
Reviewed Papers for Journals
Impact Factor: N/A

Energy for Sustainable Development 2025
Reviewed Papers for Journals
Impact Factor: 4.4

Sensors 2025
Reviewed Papers for Journals
Impact Factor: 3.4

Drones 2024
Reviewed Papers for Journals
Impact Factor: 4.4

Journal of Applied Research on Science 2024
Reviewed Papers for Journals
Impact Factor: N/A

N/A 2024
Reviewed Papers for Journals
Impact Factor: N/A

IEEE Access 2024
Reviewed Papers for Journals
Impact Factor: 3.4

2024
Reviewed Papers for Journals
Impact Factor: -

Agronomy 2024
Reviewed Papers for Journals
Impact Factor: 3.3

Applied Sciences 2023
Reviewed Papers for Journals
Impact Factor: 2.7

Applied Sciences 2023
Reviewed Papers for Journals
Impact Factor: 2.7

Applied Sciences-Basel 2023
Reviewed Papers for Journals
Impact Factor: 2.7

Applied Sciences-Basel 2023
Reviewed Papers for Journals
Impact Factor: 2.838

2023
Reviewed Papers for Journals
Impact Factor: N/A

Journal Management System 2023
Reviewed Papers for Journals

Impact Factor: N/A

Sensors 2023
Reviewed Papers for Journals
Impact Factor: 3.847

2023
Reviewed Papers for Journals
Impact Factor: N/A

2023
Reviewed Papers for Journals
Impact Factor: N/A

2023
Reviewed Papers for Journals
Impact Factor: N/A

2023
Reviewed Papers for Journals
Impact Factor: N/A

Applied Sciences-Base 2023
Reviewed Papers for Journals
Impact Factor: 2.838

Sensors 2022
Reviewed Papers for Journals
Impact Factor: 3.847

2022
Reviewed Papers for Journals
Impact Factor: N/A

2022
Reviewed Papers for Journals
Impact Factor: N/A

2022
Reviewed Papers for Journals
Impact Factor: N/A

2022
Reviewed Papers for Journals
Impact Factor: N/A

2022
Reviewed Papers for Journals
Impact Factor: N/A

Journal of Integrated and Advanced Engineering 2022
Reviewed Papers for Journals
Impact Factor: Nil

2022
Reviewed Papers for Journals
Impact Factor: n/a

2022
Reviewed Papers for Journals
Impact Factor: n/a

2022
Reviewed Papers for Journals
Impact Factor: n/a

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Reviewed Papers for Journals
Impact Factor: n/a

2022

Reviewed Papers for Journals
Impact Factor: n/a

2022

Reviewed Papers for Journals
Impact Factor: n/a

Trainings

Prime Minister's Youth Skill Development Programme, Batch-5 2024
Partner: National Vocational and Technical Training Commission (NAVTTC)
Duration: 13-Feb-2024 to 31-Jul-2024

Prime Minister's Youth Skill Development Program (PMYSDP), Batch-4 2022
Partner: National Vocational and Technical Training Commission (NAVTTC
Duration: 23-Nov-2022 to 22-Aug-2023

Prime Minister's Youth Skill Development Program (PMYSDP), Batch-3 2021
Partner: National Vocational and Technical Training Commission (NAVTTC
Duration: 01-Nov-2021 to 06-Sep-2022